

## Alaska Region

*[The following is an edited version of the verbatim transcript of Tim Holder's presentation, supplemented by material from the written description of ongoing and proposed studies in the Alaska Region Mr. Holder provided to conference participants.]*

Alaska is an enormous state, covering an area equal to twenty percent of the lower forty-eight states. The route of the Trans Alaska Pipeline, from Dead Horse on the north coast to Valdez on Prince William Sound, covers some eight hundred miles. Presently, the prospective oil developments known as Liberty and Northstar, located in the central Beaufort Sea, are at the center of attention of socioeconomic studies in Alaska. The former will be the first OCS development in Alaska in over twenty years of leasing.

The communities most directly affected by these two developments are Nuiqsut (with a population of about four hundred fifty), Kaktovik (with a population of about two hundred forty) and Barrow (with a population of about four thousand four hundred). These are predominantly Native Alaskan Inupiat communities whose people still engage in a great deal of subsistence hunting and gathering. The most important subsistence food source is the Bowhead whale, which can reach fifty feet in length and fifty tons. Whale hunting is the focus of elaborate community activities as well as a source of food, so it is central to Inupiat culture. Hence, Inupiat communities are greatly concerned with the effects of oil and gas exploration and development on the whale population. For example, the possibility that the noise of seismic exploration could deflect migrating Bowhead whales farther offshore has been a topic of much debate. Given the importance of all forms of subsistence hunting and gathering to Native Alaskans, examining the potential effects of oil and gas development on subsistence resources and practices has been of great importance to the studies program in the region.

The Environmental Studies Program in Alaska is guided by its Annual Studies Plan (ASP). The regional ASPs are prepared in accordance with the MMS national planning process, within the general guideline of the National Strategic Plan. The process of preparing the ASP begins each year by soliciting ideas for new studies from a broad range of people, agencies and organizations. The Environmental Assessment section of the MMS in Alaska, which is responsible for preparing EISs, provides many ideas for new studies. The studies program also solicits ideas from about two hundred agencies and other interested parties outside the MMS. Among others, these include federal, state and local government agencies, Native Alaskan groups and environmental groups. The program makes a vigorous effort to include all interested parties. The full process of preparing the ASP, including review by other MMS offices and the MMS Scientific Committee, lasts from March through December. While a regional ASP is produced for each year, generating new ideas for studies and planning future research is really an ongoing process. The results of the research the studies

program conducts on the Alaska Region are used to prepare the environmental assessments and impact statements required by the National Environmental Policy Act. They also contribute to preparing mitigation measures, reviewing oil spill contingency plans, conducting dialogs with coastal communities and reviewing and formulating offshore oil and gas development policy.

The following summaries of proposed and ongoing studies illustrate the substance of socioeconomic studies activity in Alaska.

### **Ongoing Studies**

#### *Sociocultural Consequences of Alaska OCS Activities: Data Analysis/ Integration, All Alaska Planning Areas, FY 1996-1999*

The Alaska OCS Region has implemented an important socioeconomic component of its overall Environmental Studies Program, resulting in the publication of 159 technical reports. In recent years, socioeconomic studies have become more focused, emphasizing the critical points of engagement between OCS development and social systems. This 4-year study has two components:

- Formal, comparative, quantitative, and qualitative analysis of existing data that document changes in the human environment related to OCS activities.
- Local-level constituent participation in sociocultural information review and monitoring of social change.

The study will produce an annotated bibliography, integrated data sets, meta files, ethnographies, oral histories and integrated analysis of long-term OCS impacts on communities. This study is a Cooperative Agreement with the Alaska Department of Fish and Game, Subsistence Division.

#### *Economic and Social Effects of the Oil Industry in Alaska, 1975-1995, All Alaska Planning Areas, FY 1997-1999*

Oil industry activities in all Alaska OCS regions have evolved only to the exploratory phase and onshore activities in Alaska are in decline. The decline in onshore activities is due in large part to the reduced production of Prudhoe Bay fields, low oil prices, and attractive international exploration and development opportunities. This could cause major economic restructuring throughout Alaska and influence statewide socioeconomic structures and functions in unknown ways. For example, most of the institutional, cultural, and physical infrastructure developed in Alaska in the past 20 years was paid for by funds generated by the sale of onshore oil and gas products. As that income stream declines, reallocations probably will be required. The objective of this study is to achieve a more complete understanding of community economics and linked sociocultural relationships during the downsizing anticipated for the oil industry in Alaska.

*Exxon Valdez Oil Spill, Cleanup, and Litigation: A Community-Based Collection of Social-Impacts Information and Analysis, 1989-1996, All Alaska Planning Areas, FY 1996-1998*

The oil spill from the Exxon Valdez grounding not only contaminated natural habitat and resources but also produced a cleanup effort that had its own social impacts among communities in Southcentral Alaska. The effects from the oil spill, cleanup, and subsequent litigation have been documented in media coverage and by research initiated by the MMS, the Alaska Conference of Mayors, the State of Alaska, Federal resource and response agencies, academic institutions, and individual researchers. The study has the following objectives:

- Collect, organize and synthesize all community-based social information associated with the Exxon Valdez oil spill, cleanup, and associated litigation that shows the effects on the human environment.
- Analyze the literature showing the effects on key social factors resulting from the Exxon Valdez oil spill, cleanup, and litigation.
- Solicit input and concurrence on the key social factors from representatives of the MMS, the State of Alaska, local communities, and Native organizations.
- Prepare an annotated bibliography, abstracts, descriptions of social factors, and analytical findings of this study on a PC-based CD-ROM.

*Collection of Traditional Knowledge of the Alaskan North Slope, Beaufort Sea, Chukchi Sea, Hope Basin, FY 1997-1999*

The Native peoples of Arctic Alaska have thousands of years of experience in living in Arctic environments and have much knowledge of both the marine and terrestrial ecosystems. Most of this knowledge has been passed on from one generation to the next by word of mouth. Much traditional knowledge has, however, been written down, audio-recorded, archived and, in some cases, published. Because these sources do not have an index, the scientific community is not aware of them or has difficulty obtaining them. Potential closure of the Bureau of Indian Affairs Alaska Native Claims Settlement Office could leave the 8,000 interview files unavailable. The study will produce an indexed annotated bibliography and abstracts of recorded traditional knowledge sources on a PC-based CD-ROM. ( A similar study is proposed for the Cook Inlet and Shelikof Strait areas in FY2000-2002.).

*Subsistence Economies and North Slope Oil Development, Beaufort Sea, Chukchi Sea, FY 1997-1999*

The Alaska Department of Fish and Game, Division of Subsistence, has conducted comprehensive household surveys in Kaktovik and Nuiqsut to track changes in subsistence and employment patterns on the North Slope. The MMS and other agencies have collaborated on these studies. Information in the data sets includes:

- Subsistence-harvest quantities at the species level.

- Household employment by industry and job type.
- Income levels.
- Demographic composition of households.
- Sharing of subsistence resources.
- Mapped information of subsistence harvest-areas.

The objective of this study is to use these data to analyze continuity and change in the subsistence and wage-employment activities of households in Kaktovik and Nuiqsut.

*Cook Inlet, An Economic Assessment of the Marine Sport Fisheries in Lower Cook Inlet, FY 1997-1999*

The marine sport fisheries of lower Cook Inlet are the focus of a rapidly expanding tourist economy. Considerable information exists on the economic value and impact of commercial fisheries off Alaska. The economic value and impact of sport fishing activities have not been rigorously evaluated. The objective of this study is to produce an econometric model which analyzes:

- The effects of changes in sport-fishing opportunity on angler net benefits.
- The ultimate impact of those changes on the regional economy.

*Publication of a Book/Synthesis on the Socioeconomic Effects of Oil and Gas Industry Activity on the Alaska OCS, All Alaska Planning Areas, FY 1998-2000*

A comprehensive formal, comparative, quantitative, and qualitative documentation of existing data on changes in the socioeconomic environment related to OCS activities will make this information more useful for decision makers. The primary objective of this study is to coordinate and prepare a synthesis of selected technical reports produced under MMS contracts. A secondary objective of this study is to help resolve conflicts between those who favor resource development and those who oppose any activity that might pose risks by providing a peer-reviewed synthesis of current information for use in decision making.

*Update Oil Industry Labor Factors for Alaska Manpower Model, All Alaska Planning Areas, FY 1998*

The Manpower Model was created in the late 1970's and early 1980's to project the number of workers directly employed in proposed OCS exploration and development activities. This data is also used to predict secondary employment and population. The employment data from the Manpower Model and the secondary employment and population data are also used in EISs. Changes in industry technology make it necessary to re-examine and adjust the input variables to this model. The objective of this study is to update the Manpower Model with input variables that accurately reflect the number of workers needed to complete tasks associated with exploration, development, and production on the OCS.

*Reference Manual and GIS Overlays of Oil-Industry and Other Human Activity (1970-1995) in the Beaufort Sea, Beaufort Sea, FY 1998-1999*

Analysis of the potential effects on wildlife of oil-industry and other human activities has been limited by the quality and resolution of data available. This study will provide wildlife scientists, Native organizations, and others with the authoritative historic information on human activity needed to analyze the potential effects of such activities on whale migrations, wildlife distributions, shipwrecks, and other phenomena.

**Proposed Studies**

*Monitoring Key Indicators of Socioeconomic and Cultural Change of Communities on the Alaskan North Slope, Beaufort Sea, Chukchi Sea, and Hope Basin, FY 2000 - 2004*

The Alaska OCS Region funded the Social Indicators Study completed in 1995. The study was initially designed to measure socioeconomic effects at the community level with and without oil and gas activity. It was enlarged to encompass several villages directly affected by the *Exxon Valdez* oil spill of March 24, 1989. The North Slope communities of Barrow, Nuiqsut, Kaktovik, Anaktuvuk Pass, Wainwright, and Pt. Hope were sampled in the initial development of the indicators. With the first development and production activity proposed offshore in the Beaufort Sea, and other offshore and onshore activities ongoing, further monitoring is needed. The objectives of this study are to monitor the following dimensions of socioeconomic and cultural changes in communities on the Alaskan North Slope:

- How subsistence harvest patterns are affected by ongoing oil and gas development.
- Whether younger Natives are hunting more or less than elders in relation to oil and gas development.
- How the cash component of household income affects subsistence participation.
- What kinds and degrees of stress ongoing and proposed oil and gas developments impose on Native Alaskans..
- How oil and gas activities have affected the sharing of subsistence resources.

The results of the FY 2000-2004 sampling will be compared to the study completed in 1995.

*Traditional Knowledge/Western Science Bowhead Whale Migration Seasonal Report, Beaufort Sea, Chukchi Sea, Hope Basin, FY 2001-2003*

The MMS will continue to incorporate pertinent indigenous knowledge in its EISs. The wealth of Native observations on area wildlife, particularly bowhead whales, is vital to this effort. Observations about particular bowhead migrations are not readily available to non-Natives and scientific and regulatory information relative

to bowhead migrations is not always readily available to Native villagers in a reader-friendly format. The synthesis of this information provides an unprecedented opportunity for MMS to bridge the gap between Traditional Knowledge and Western Science. Information from the project will be valuable for the consultation process under the existing stipulations on subsistence whaling and other subsistence activities.

*Collection of Traditional Knowledge of the Cook Inlet and Shelikof Strait, Cook Inlet, FY 2000-2002*

This study is patterned after the study titled "Collection of Traditional Knowledge of the Alaskan North Slope." It would:

- Work with community elders, Native villages, and subsistence coordinators with Native organizations to identify traditional knowledge sources appropriate for inclusion in the traditional knowledge database.
- Include in the traditional knowledge database, at a minimum:
  - Subsistence areas.
  - Harvest methods.
  - Relationships between physical environment and animal populations and behavior.
  - Marine mammal behavior, movement, and distribution.
  - Ice conditions and movement.
  - Wind patterns and current patterns.
  - Place name information.
- Locate, collect and organize all recorded traditional knowledge information associated with the North Slope of Alaska, including:
  - Oral-history-taped interviews.
  - Written transcripts.
  - Published sources.
  - Textual and video records of CD-ROM "jukeboxes" of elder interviews.
  - Textual and video records of Elders' Conferences.
  - Native allotment interview files (8,000) at the Bureau of Indian Affairs Alaska Native Claims Settlement Act Office.
- Identify key traditional knowledge indices for structuring and abstracting.
- Prepare an annotated bibliography, abstracts, traditional knowledge indices and findings of this study on a PC-based CD-ROM.
- Disseminate the CD-ROM to Native communities, local governments, the State of Alaska, and Federal offices involved in environmental research and assessment.

*Update Baseline Study of the Cultural Resource Potential of the Beaufort Sea, Beaufort Sea, Chukchi Sea, Hope Basin (as applicable), FY 2000*

In 1978 a baseline study was prepared identifying the potential for Cultural and Archaeological resources in the Beaufort Sea (and Lower Cook Inlet and the

Western Gulf of Alaska). In 1986, Technical Report Number 119, MMS Study 86-0018 "Alaska Outer Continental Shelf Cultural Resource Compendium", was published. Since these baseline studies were released, significant geotechnical and geophysical data have been collected and analyzed in support of OCS exploratory operations. The validity of these earlier studies needs to be reviewed. The present study will utilize data from the latter. Over twelve years of data collection in the Beaufort Sea need to be analyzed for their cultural resource potential and detailed evaluations for cultural and archaeological resources need to be completed prior to permitting future exploration and development projects in the Beaufort Sea . This cultural resource study is an extension of and supplement to a proposed FY 1999 study titled "Evaluation of Sub-Sea Physical Environmental Data for the Beaufort Sea OCS and Incorporation into a Geographic Information System (GIS) Database." It has the following objectives:

- Statistical analysis of pertinent data and data bases, including interpretation of and extraction from large amounts of previously aggregated, generalized data to determine probable specific cultural sites.
- Development of a new baseline study for the Beaufort Sea incorporating the guidelines in the "MMS Handbook for Archaeological Resource Protection.
- Preparation of plat maps of the Beaufort Sea which identify the potential/probability for cultural and archaeological resources.